

Amendments to the Claims:

1. (currently amended) A method for routing packets in a router having a plurality of router interfaces through which the packets are received from a plurality of address domains, the method comprising:  
  
dedicating a separate routing table in the router to each address domain of the plurality of address domains;  
  
associating each router interface with one of the routing tables;  
  
and  
  
executing a single IP stack to receive a packet from any of the router interfaces and to identify the associated routing table in the router for handling the received packet.
2. (canceled)
3. (previously presented) The method of claim 1, wherein a mapping array associates interfaces connecting to the same address domain with the same routing table.
4. (previously presented) The method of claim 1, wherein executing a single IP stack forwards a received packet according to the identified routing table when the received packet is a data packet and updates the identified routing table when the received packet is a control packet.

5. (canceled)
6. (original) The method of claim 1 wherein each of the plurality of address domains represents a virtual private network.
7. (currently amended) A router comprising:
  - a plurality of router interfaces through which packets from a plurality of address domains are received;
  - a separate routing table in the router associated with each address domain; and
  - a domain manager executing a single IP stack to receive a packet from any of the router interfaces and to identify an appropriate associated routing table in the router for handling the received packet.
8. (canceled)
9. (previously presented) The router of claim 7, wherein the domain manager comprises a mapping array that associates each interface to a routing table.
10. (previously presented) The router of claim 7, wherein the domain manager executing the single stack forwards a received packet according to the identified routing table when the received packet is a data packet and updates the identified routing table when the received packet is a control packet.

11. (canceled)
12. (original) The router of claim 7 wherein each of the plurality of address domains represents a virtual private network.
- 13.- 20. (canceled).